NW Region, Area 5

Integrated Roadside Vegetation Management Plan

August 2006

Washington State
Department of Transportation
Maintenance and Operations Division

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Summary

This plan explains the Washington State Department of Transportation's (WSDOT) policy and practice for maintenance of roadside vegetation for Maintenance Area 5 within the agency's Northwest Region. This area manages vegetation within approximately 220 miles of state highway corridor in King and southwest Snohomish Counties. Crews in this maintenance area also contend with some of the highest traffic volumes in the state. Major corridors in the area include portions of Interstates 5, 90 and 405. Other limited access corridors include State Routes 520, and 599/99. Roadsides along secondary highways within incorporated city limits are typically maintained by the cities. A map of all highways in the area is included as **Figure 1** on the following page.

The primary objectives in maintenance of roadside vegetation are in relation to safety of the highway users and control of legally designated noxious weeds where they occur on the right of way. Other considerations include protection and preservation of natural environment, preserving and enhancing the natural scenic quality of the roadside, and being a good neighbor to the many adjoining property owners, particularly when nuisance vegetation grows over the fence. In all cases, roadside vegetation maintenance activities are planned and conducted in a way that discourages or eliminates unwanted vegetation and promotes desirable vegetation. This is the basic premise of Integrated Vegetation Management (IVM) and the foundation of the program.

This document and associated information management tools serve as the primary reference for maintenance of roadside vegetation in the area. Included is detailed information on locations for planned routine maintenance practices, reoccurring weed infestations, sensitive areas, and other areas with special management considerations. Also included are guidelines and prescriptions for best management practices in dealing with roadside vegetation problems and opportunities. In effect, this plan supports WSDOT's compliance with state law (RCW 17.15) by implementing the principles of Integrated Pest Management for the management of roadside vegetation. It also supports WSDOT's long-range goals for the management of roadsides to:

- Create naturally stable, sustainable plant communities
- Improve effectiveness and efficiency in the control of weeds and unwanted trees and brush
- Reduce roadside maintenance cost and herbicide use over time

This plan is organized around the major categories of roadside vegetation maintenance work. The major categories include: Zone 1 (or pavement edge maintenance), Routine Mowing, Noxious Weed Control, Nuisance Weed Control, Tree and Brush Control, and Special Maintenance Areas.

The management of roadside vegetation is a dynamic process and it is intended that this plan be continuously adapted over time based on input from a variety of sources. An integral component of the plan is a database for recording Integrated Vegetation Management (IVM) treatments for specific vegetation controls and locations, and to record information on follow up evaluation on these treatments. This information will be used to refine planned treatments over time.

WSDOT is also requesting that local public and private entities with an interest in weed control and vegetation management provide input on the plan and cooperate in efforts where appropriate. Copies of the draft plan are available online: www.wsdot.wa.gov/maintenance/vegetation/mgmt_plans.htm, hard copies can also be provided upon request. Please contact Jim McBride or Ray Willard with questions or comments:

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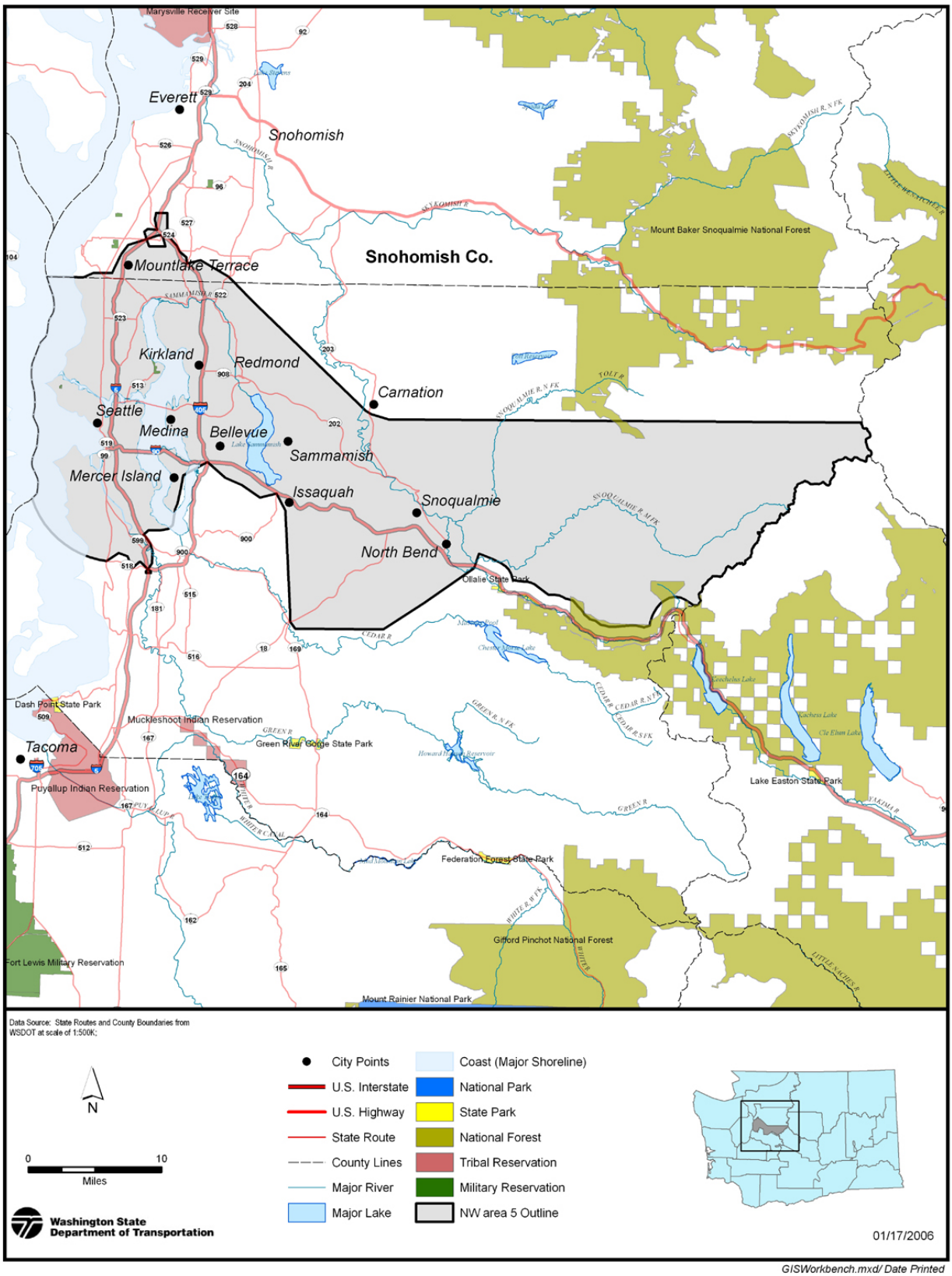


Northwest Region, Area 5 Map
Figure 1

Roadside Management Considerations

The primary objectives for maintenance of roadside vegetation are to provide for safe highway operation, and to comply with legal regulations for control of noxious weeds and protection of the environment. Overall WSDOT maintenance policy and procedures are defined in Chapter 6 of the WSDOT Maintenance Manual (M51-01, March 2002) www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/MaintenanceManual.pdf

Visual Quality
It is also important to maintain appropriate visual standards in the appearance of the roadside. All maintenance activities should be conducted in a way that minimizes visual impacts such as wide spread "brown-out" from herbicides or shattered limbs from side trimming. Roadsides should look as natural as possible throughout the year. Appropriate visual quality for roadsides throughout the state is defined in the WSDOT Roadside Classification Plan (June 1996) www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/RCP.pdf

Operational Zones
WSDOT roadsides are divided into several zones for the purposes of assigning management objectives, maintenance needs, and thresholds for triggering vegetation maintenance actions. Noxious weed species designated for control by state and county law are controlled throughout all zones. Not all management zones occur along all state highways. In some cases the narrow width of the right-of-way or adjoining land-use, limits the operational zones to Zone 1 and/or a narrow Zone 2 only. Roadside vegetation management zones are illustrated in **Figure 2** below and defined as follows:

> **Zone 1** – A vegetation free gravel shoulder, where needed, is maintained as a one to three-foot wide strip to provide for key maintenance, operational, safety, and pavement and guardrail preservation needs.
>
> **Zone 2** – The operational zone extends from the edge of Zone 1 or the pavement edge to a width necessary to provide for safe errant vehicular recovery, maintain sight distance at corners and intersections, and provide for other operational, safety, and environmental functions.
>
> **Zone 3** – In areas with sufficient right-of-way width, a buffer or transition zone extends from Zone 2 to the right-of-way line to provide a buffer or transitional area between the highway facility and adjacent land uses. This area is maintained selectively, and to the greatest degree possible as a self-sustaining plant community, to minimize erosion as well as the growth of weeds and undesirable trees and brush.

Roadside Maintenance Activities
All roadside maintenance activities are to be planned and conducted in a way that discourages or eliminates unwanted vegetation and promotes desirable vegetation. This is the basic premise of Integrated Vegetation Management. In every case it is essential that the results of maintenance activities are evaluated and adjusted as necessary to maximize efficiency and effectiveness. However, in some cases maintenance activities are conducted more consistently on an annual basis, such as maintenance of Zone 1 where required, and routine mowing where specified.

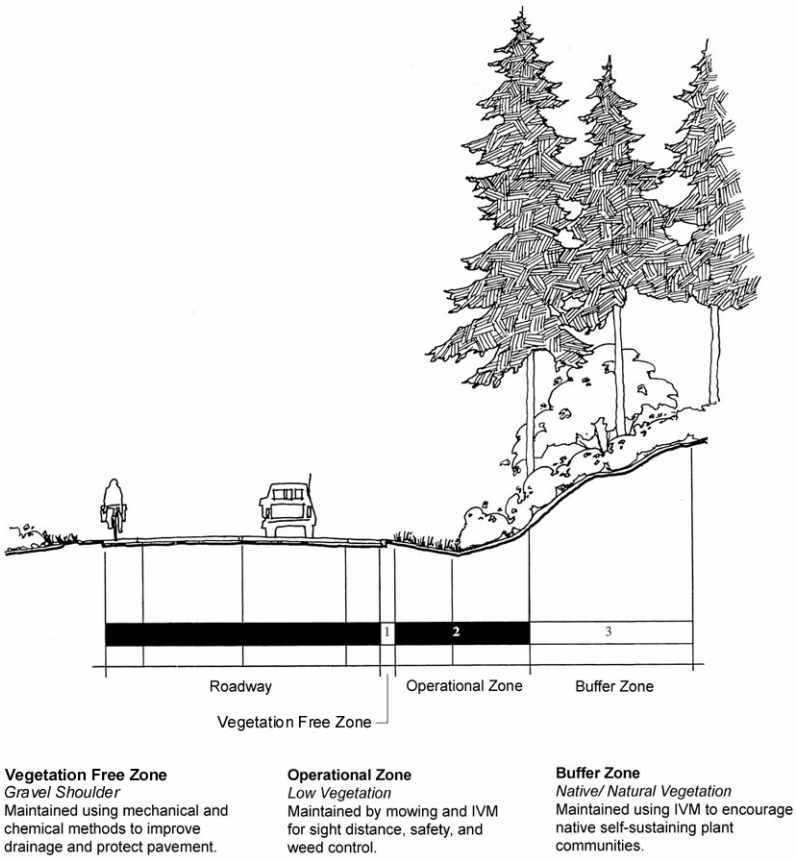
> **Routine Maintenance Activities** – When vegetation maintenance activities are intended to keep the area of roadside being treated in an annually controlled condition, they are considered routine. This is more critical for areas of vegetated roadside near the travel lanes, edge of pavement, and around guardrails. This plan provides prescriptions and gives locations for routine maintenance activities including maintenance of Zone 1 and annual mowing.
>
> **Integrated Vegetation Management Activities** – Although all activities are to be planned and conducted in accordance with the principles of IVM, many vegetation maintenance activities are intended to target a specific type or types of unwanted plants.

By carefully planning and carrying out these target specific activities it is possible over time to establish desirable vegetation, which will prevent the re-infestation of unwanted plants. The process for determining and carrying out IVM actions is illustrated in **Figure 3** below. This plan provides information, locations, and gives prescriptions for selective control of weeds and other unwanted vegetation and the promotion and establishment of desirable vegetation. Further information and guidance on the application of IVM is available in the document Integrated Vegetation Management for Roadsides (WSDOT, July 1997) www.wsdot.wa.gov/maintenance/pdf/IVM.pdf

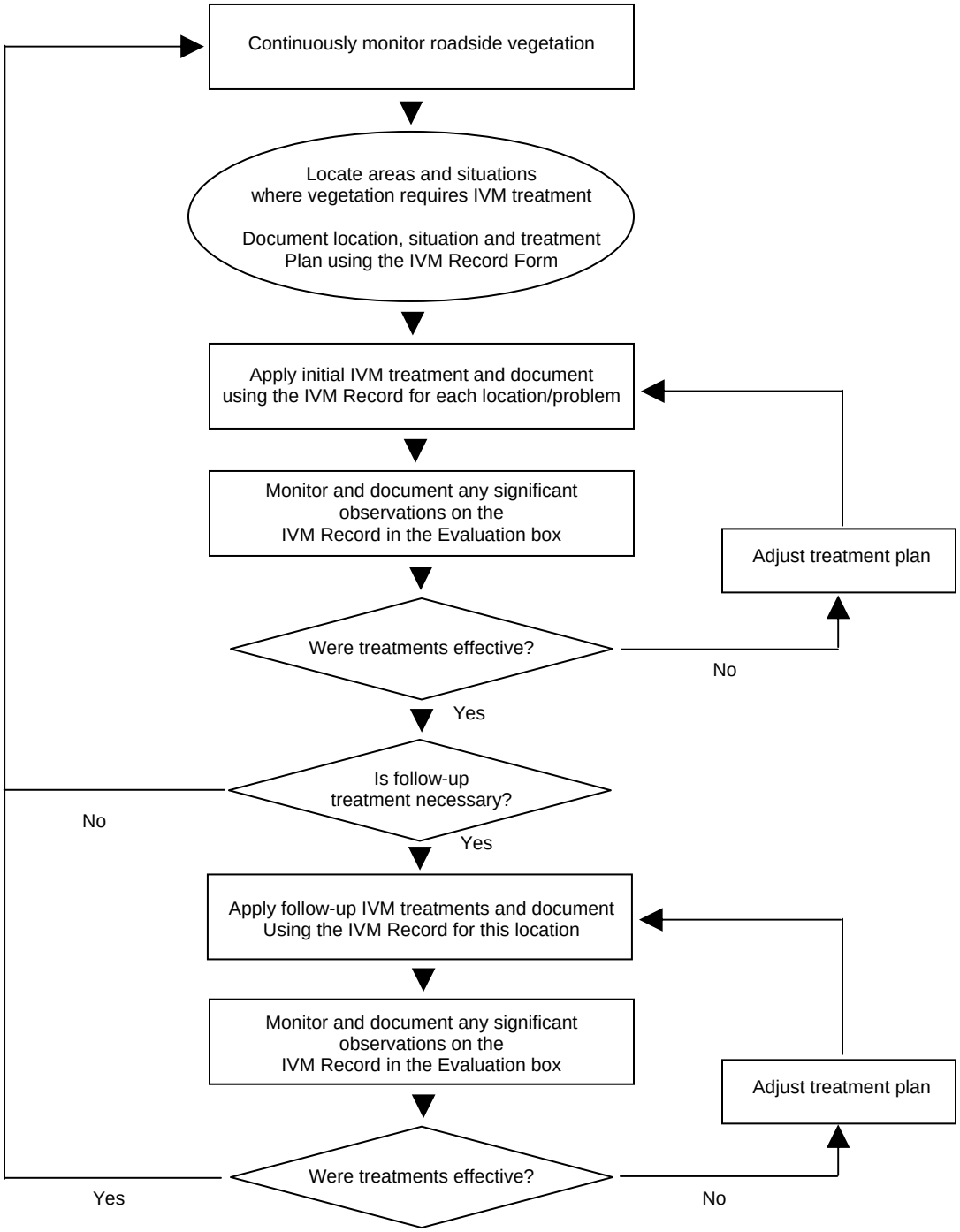
Special Maintenance Areas – In some locations there are unique situations that require consideration in determining appropriate vegetation maintenance actions. Examples of these are: environmentally sensitive areas, areas with special neighbor concerns, areas where a higher level of maintenance is expected such as gateway interchanges or formally landscaped areas, or along highways that cross tribal or federal lands. This plan provides information and guidance on the locations and unique requirements or restrictions on maintenance activities in all of these situations throughout the area.

Herbicide Use

WSDOT has conducted independent research on herbicide risk from toxicity and environmental fate, based specifically on agency application methods and use rates. Findings from this research have been used to establish an approved palette of herbicides and application limits for state highways. A complete summary of herbicides approved for use on WSDOT rights of way is included in **Appendix B**.



Typical Roadside Vegetation Management Zones
Figure 2



The IVM Decision-Making Process
Figure 3

Area IVM Goals

The purpose of this section is to identify short and long term goals for roadside vegetation management in the NW Region, Area 5. These goals are intended to help direct decisions that effect roadside maintenance and/or design/construction. These goals will be updated and evaluated on a yearly basis as part of the area's annual winter planning meetings.

Long Term Goals (2006 – 2011)
Long term goals are set to be achievable within 5 years. These goals are broad-scale in nature and may apply to maintenance operations and/or roadside condition.

> *Need to develop and document long term goals as part of the 2006 winter planning meeting.*

Short Term Goals (2006 – 2007)
Short term goals are set to be achievable within 1 to 3 years. These goals are more specific in nature and are established with specific measures that can be documented and reported.

> *Need to develop and document short term goals as part of the 2006 winter planning meeting.*

1. ROUTINE MAINTENANCE ACTIVITIES

Roadside maintenance activities are considered routine when regular annual treatment is required to keep vegetative growth from interfering with highway operational and maintenance objectives. Typical routine maintenance activities are maintenance of Zone 1 and certain types of mowing and trimming.

1.1. Routine Shoulder Maintenance (Zone 1)

WSDOT is currently re-evaluating its policy for maintenance of Zone 1. Past policy and practice will be refined over the coming years in response to findings from study of long-term benefit/cost resulting from alternative treatments. For the 2006 growing season, vegetation at the edge of pavement will be managed as follows on roadsides in this maintenance area:

1.1.1. Policy and Practice

- Zone 1 is maintained with the annual application of herbicides under all guardrail sections and in select locations throughout the area.
- Zone 1 where maintained is 3' in width or less.

1.1.2 Methods

- Zone 1 is maintained through an annual application of non-selective, pre-emergent and post-emergent herbicides in May/June.
- See **Appendix A, Routine Maintenance Prescriptions, Zone 1 Maintenance**

1.1.3 Locations

- Areas for Zone 1 maintenance and areas set aside for evaluation of alternative practices are shown in **Appendix C, Zone 1 Map**

1.2. Routine Mowing/Trimming (Zone 2)

1.2.1. Policy and Practice

- Routine annual mowing only occurs in designated areas on limited access highways adjacent to edge of pavement Zone 2, and beyond Zone 2 in designated focus areas such as interchanges and urban landscapes as described in **Section 3**. In all other areas mowing is only used as part of IVM treatments for weed and brush control as described below in **Section 2**.
- On secondary/non-limited access roads in Area 5, routine annual mowing and/or side-trimming is conducted on all shoulders where Zone 1 is not maintained, and as needed in any locations to preserve site distance at curves, intersections and/so any other highway entry points.

1.2.2. Methods

- On limited access highways routine annual mowing areas are designated as either single pass or multiple pass.
- Single pass mowing consists of one pass up to the maximum width of mowing equipment (25' max.) but may be as narrow as 6' depending on the roadside configuration.
- In areas designated as multiple pass mowing, roadsides are mowed out from edge of pavement to the right of way line, the edge of shrub beds, or across the entire median widths depending on the location and the presence of desirable vegetation.
- See **Appendix A, Routine Maintenance Prescriptions, Zone 2 Maintenance**

1.2.3. Locations

- **Appendix D, Routine Mowing Map** shows locations where routine annual mowing occurs as one pass and as multiple passes.

1.3. Hazard Tree Removal

1.3.1. Policy and Practice

- Hazard tree removal is considered a routine maintenance activity because maintenance is constantly on the look out for any trees that pose an imminent threat to the highway or traffic, and whenever hazard trees are identified they are routinely removed as soon as possible.
- Hazard trees may be dead, leaning, or structurally unsound. Best horticultural judgement will be used in evaluating trees that appear diseased or structurally unsound or are believed to pose a long-term threat to determine the best course of action.
- Another consideration in removal of trees is the contribution to shading in areas prone to frost and ice formation on the highway surface. When such areas are identified, the surrounding canopy may be thinned through selective removal of large trees on the right of way.

1.3.2. Methods

- Hazard trees are removed in such a manner to minimize damage and impact to the highway structure and other healthy trees and understory vegetation.

2. INTEGRATED VEGETATION MANAGEMENT ACTIVITIES

For all vegetation management needs not addressed through routine maintenance as described above, activities are planned and carried out using the principles of Integrated Vegetation Management (IVM) and the decision making process diagrammed in **Figure 3** on Page 7. IVM is a coordinated decision making process that uses the most appropriate vegetation management methods and strategy, along with a monitoring and evaluation system, to achieve long-term roadside maintenance goals and objectives in an environmentally and economically sound manner. The goal in utilizing the IVM approach is the establishment of stable, low maintenance native or naturalized plant communities on the roadside that are compatible with highway maintenance and safety objectives, preservation of environmental quality, weed control requirements, and the concern's of WSDOT's customers and neighbors. Long term, the use of the IVM approach can reduce the intensity and cost of maintenance as well as minimizing the need to use herbicides.

2.1. Integrated Vegetation Management Planning and Tracking Database

2.1.1. Policy and Practice

- An Integrated Vegetation Management Records database is available for use. This database is accessed through the same WSDOT network application as the Pesticide Application Records database.
- Any activities focused on treatment of a specific location and species infestation, or focused on treatment of any types of unwanted vegetation throughout the area will be documented with an initial IVM record outlining the long-term treatment plan. These same records will be updated over time whenever planned treatments are carried out, or when observations are made as to the success or failure of past treatments.
- Treatment records may be printed out and inserted into **Appendix H** in the plan binder.

2.2. Noxious Weed Control

2.2.1. Policy and Practice

- Noxious weed control is a high priority for WSDOT because of state law requiring control of designated species. Transportation rights of way are high priority locations for control of noxious weed species within the state because they cross and link so many adjacent properties and land uses.
- Whenever possible designated noxious weed species and infestations locations will be documented and treated following plans as defined by IVM record forms in the database.
- Washington State Law classifies noxious weeds in three classes: A, B, and C. All Class A species are required control wherever they occur statewide. The law allows for individual county weed boards to designate individual Class B and C weeds for control within the counties depending on how widespread and potentially harmful they are at the local level.
- For the purposes of this plan, noxious weeds are defined as species within any class designated for mandatory control within the counties.
- For NW Region, Area 5 the following weeds are considered mandatory for control and are known to exist on state highway rights of way in King and Southwest Snohomish Counties.

Class A
Class A noxious weeds are non-native species with a limited distribution in the state. The only Class A species known to exist on WSDOT rights of way in this area are:

Common Name/Botanical Name	***King***	***Sno***
Giant hogweed/Heracleum mantegazzianum	◆	

Class B
Class B weeds are more widespread than Class A, with control mandated by law only if infestations are generally limited and the species are designated within the individual counties by the County Noxious Weed Control Boards. The following Class B weeds are known to exist on state right of way and are designated for mandatory control in King and/or Snohomish Counties:

Common Name/Botanical Name	***King***	***Sno***
Ragwort tansy/Senecio jacobaea	◆	◆
Knapweed sp./Centaurea sp.	◆	◆
Purple loosestrife/Lythrum salicaria	◆	◆
Wild chervil/Anthriscus sylvestris	◆	◆
Sulfur cinquefoil/Potentilla recta	◆	◆
Hawkweed sp./Hieracium sp.	◆	◆
Dalmatian toadflax/Linaria dalmatica	◆	◆

Class C
Class C noxious weeds are widely established throughout Washington or may impact the agricultural industry.

Common Name/Botanical Name	***King***	***Pierce***
Common reed/Phragmites australis	◆	
Poison hemlock/Conium maculatum		◆

2.2.2. Methods

- Because noxious weed species are typically difficult to control, herbicides treatments are often the primary, initial means of control.
- If infestations are limited to a few plants, hand pulling is also effective when the entire root system is also removed. Maintenance employees are encouraged to be aware of and look for new noxious weed occurrences, and to stop and pull these plants whenever possible.
- In conjunction with weed control treatments, a variety of other measures may be taken to promote natural vegetative competition through seeding, planting, and soil enhancement. The IVM Record and database are essential to the execution and success of these control measures.
- For recommended treatments specific to noxious weed species, see **Appendix A, IVM Prescriptions, Noxious Weed Control**

2.2.3. Locations

- **Appendix E, Noxious Weed Location Map** shows locations where reoccurring infestations of noxious species requiring mandatory control are known to exist in NW Region, Area 5.

2.3. Nuisance Weed Control

2.3.1. Policy and Practice

- For the purposes of this plan, nuisance weed species are defined as species listed as Class B and C weeds on the state noxious weed lists, but not required for control within individual counties.
- Nuisance weed control, while not required by state law, provides many positive benefits to the overall condition of the roadside, enhances ecological function by maintaining and enhancing native plant communities, reduces the potential for continuing spread of weed infestations, and enhances visual quality.
- Nuisance weed species will be controlled when time and budget allows.
- Priority will be given to locations with the highest chance for success including relatively new infestations and where there is potential for infestations to spread to un-infested areas of the right of way or to un-infested neighboring properties.
- Species considered nuisance weeds in NW Region, Area 5 include:

Common Name/Botanical Name	***King***	***Sno***
Butterfly bush/Buddleja davidii	◆	◆
Poison hemlock/Conium maculatum	◆	Noxious
Knotweed sp./Polygonum sp.	◆	◆
St. Johnswort/Hypericum perforatum	◆	◆
Common tansy/Tanacetum vulgare	◆	◆
Bull thistle/Cirsium vulgare	◆	◆
Canada thistle/Cirsium arvense	◆	◆
Scotch broom/Cytisus scoparius	◆	◆
Common Mullein/Verbascum thapsus	◆	◆
Himalayan blackberry/Rubus discolor	◆	◆

2.3.2. Methods

- Control measures for nuisance weed are dependent on the type of plant.
- Woody species such as Scotch broom and Himalayan blackberry are most effectively treated with a combination of cutting, herbicide treatments and encouragement of native vegetation.
- Perennial species such as Canada thistle are most effective controlled by succeeding years of properly timed herbicide applications.
- Annual or biennial species such as bull thistle and common tansy may also be effectively controlled with herbicide applications when plants are in the rosette stage in spring, or by hand pulling prior to seed set.
- See **Appendix A, IVM Prescriptions, Nuisance Weed Control**.

2.3.3. Locations

- **Appendix F, Nuisance Weed Location Map** shows locations of reoccurring nuisance weed infestations in NW Region, Area 5.

2.4. Tree and Brush Control

2.4.1. Policy and Practice

- Trees and brush are controlled for safety reasons including preservation of sight distance at curves and intersections, and for visibility of signs, and preventing trees with large trunk diameter from growing too close to traffic lanes.
- Native large shrub and small tree species should be allowed to grow and mature in Zone 2 and side trimmed if they begin to encroach on site distance or other traffic operational requirements.
- Large coniferous or hardwood deciduous tree species such as Douglas fir, bigleaf maple, alder, or cottonwood left to grow in Zone 2 and in some cases parts of Zone 3, can reach substantial size over a relatively short period of time and should be removed when young.

2.4.2. Methods

- Removal of undesirable tree and brush species is typically accomplished by hand cutting, hand pulling, properly timed selective mowing, properly timed herbicide applications, or combinations thereof.
- In some locations it is most effective to mow back the majority of the existing vegetation and then selectively treat undesirable re-growth with herbicides in succeeding years, allowing desirable vegetation to grow up around and form a competitive cover.
- In some cases when tree and brush species are cut by hand, the debris can be fed through a chipper and placed back on the roadside in the form of mulch.
- Timing of these activities has a significant effect on how the vegetation grows back. Herbicide applications made by hand, directly to the cut surfaces of undesirable plants may be used to reduce or eliminate grow back.
- Chemical control methods will not be used on conifers greater than 2 feet in height.
- Chemical control methods will not be used on deciduous plants until after the first of September, except for as stump treatments in conjunction with mechanical cutting to eliminate grow-back.
- Whenever possible, safe and practical, seedling trees will be dug or pulled by hand and transplanted to areas where there growth will be beneficial and appropriate. Agreements may be signed to allow private citizens to collect seedlings for use as transplants.
- See **Appendix A, IVM Prescriptions, Tree and Brush Control**.

3. SPECIAL MAINTENANCE AREAS

Special Maintenance Areas are any locations with unique maintenance requirements or special considerations for roadside management. These areas may include interchanges, community entrances or enhancement areas, areas maintained by cities, bicycle paths, storm water retention ponds, state park land, wellheads, environmentally sensitive areas, school zones and roadsides adjacent to individual properties with current or annual no-spray agreements.

3.1. Interchanges/Intersections

3.1.1. Policy and Practice

- Interchange areas are often developed to a greater level than general roadside areas to include storm water management facilities, pedestrian areas, and permanent vegetation designed for screening, and visual enhancements for community entrances.

3.1.2. Locations

- Interchanges and intersections with unique maintenance considerations are listed in **Appendix G**, along with notes describing practices for each location.

3.2. Formally Landscaped Sections

3.2.1. Policy and Practice

- On some limited access highways in urban areas such as I-5, I-405 and I-90 in Seattle and Bellevue, the roadsides have been planted with ornamental landscaping. In general, roadsides on limited access highways in urban areas are maintained to a higher level when possible.
- Along I-90 in Seattle and Mercer Island agreements exist with cities requiring WSDOT to reimburse the city for maintenance of public access park areas on state right of way, but outside limited access walls.

3.2.2. Locations

- Areas considered as formally landscaped are listed by route and begin and end milepost in **Appendix G**, along with notes describing practices for each location.

3.3. City Maintenance Areas

3.3.1. Policy and Practice

- In most cases where non-limited access highways exist within city limits, the roadside (all area outside the highway pavement and drainage systems) are maintained by the local city government.

3.3.2. Locations

- Areas where roadsides are maintenance by cities are listed by route and begin and end milepost in **Appendix G**.

3.4. Herbicide Sensitive Areas

3.4.1. Policy and Practice

- In some situations herbicide use is limited or restricted because of legal requirements, neighbor concerns, or WSDOT imposed environmental safety precautions.
- In these locations, vegetation must be managed without the use of herbicides or with only a limited palette of herbicide types.

3.4.2. Locations

- Herbicide sensitive areas and reason/type of limitations on herbicide use are listed by route and begin and end milepost in **Appendix G**.

3.5. Adopt-a-Highway and Neighbor Maintained Agreements

3.5.1. Policy and Practice

- In some locations WSDOT has signed agreements with private citizens or neighboring businesses for maintenance of roadside vegetation.

3.5.2. Locations

- Areas with existing agreements for others to maintain a portion of the roadside are listed in **Appendix G**, along with notes describing arrangements for each location.

3.6. Storm Water Management Facilities

3.6.1. Policy and Practice

- Storm water management facilities include bio-filtration swales, retention ponds and infiltration ponds.
- Storm water management facilities are managed for noxious and nuisance weeds following the same guidelines mentioned in previous sections. The primary objectives with regard vegetation management within these facilities are maintenance the functionality in terms of the designed volume of retention and water flow, and the maintenance of the surrounding fence
- Trees and brush should be cleared along both sides of the perimeter fencing for a width of approximately 8 feet as needed.
- Inlets and outfalls should be kept clear of vegetation and debris.

3.6.2. Locations

- Stormwater management facilities are listed by route and milepost in **Appendix G**.

3.7. Wetland Mitigation Sites

3.7.1. Policy and Practice

- Wetland mitigation sites are carefully monitored through WSDOT's Environmental Services Office for up to 10 years following their creation to ensure compliance with environmental regulation. In most cases vegetation in these sites is planted and established through the construction process so the maintenance actions are not required unless noxious weeds or hazardous trees become an issue.

3.7.2. Locations

- All wetland mitigation sites under maintenance responsibility within NW Region, Area 5 are listed by the nearest route and milepost in **Appendix G**.

3.8. Protected Terrestrial Species

3.8.1. Policy and Practice

- WSDOT is currently working with the Department of Fish and Wildlife to identify highway locations where known populations of federally listed threatened and endangered terrestrial species exist on or near the highway right of way. These locations are then being matched against maintenance activities with potential to have adverse impacts on the protected species so that necessary maintenance activities can timed to avoid impacts wherever possible.
- Methods and timing of roadside maintenance activities to avoid impacts on protected terrestrial species are described in the NW Region Highway Maintenance Environmental Compliance Guide for Protected Terrestrial Species (due out Spring 2007).

3.8.2. Locations

- Once locations and guidelines have been finalized in the region compliance guide, locations and descriptions of limitations on vegetation maintenance activities will be added to the table in **Appendix G**.

3.9. Railroad Crossings

3.9.1. Policy and Practice

- State law requires that all trees and brush be kept clear on highway rights of way within 100' of railroad crossings.
- To maximize safety at rail crossings, trees and brush should be cleared as far back as practical to maximize site distance.

3.9.2. Locations

- Locations of all railroad crossing in NW Region, Area 4 are included in the table in **Appendix G**.

3.10. IVM Treatment Sites

3.10.1. Policy and Practice

- As discussed in **Section 2.1**, selected sites are designated for planning, carrying out and monitoring multi-year IVM treatments for control of weeds or other unwanted vegetation.
- IVM treatment sites are documented with an initial record in the IVM Treatment Database, to identify the problem to be addressed, location(s), management goals, and integrated treatment plan.
- Records are updated each time a treatment is made, results observed, or when the treatment plan is modified based on observations.

3.10.2. Locations

- All designated IVM treatment sites within NW Region, Area 1 are listed by the route and milepost in **Appendix G**. This list is updated annually as new sites may be added and successfully treated sites removed.

Herbicides Approved for Use on WSDOT Rights of Way

When making herbicide applications:

1. Always read and follow product labels
2. Always use personal protective equipment when mixing, loading, and applying

Chemical Name	***Product Name(s)***	***Where Used***	***How/Why Used***	***Notes/Recommendations***	***Restrictions***	***Cautions***
2,4-D	Weedar 64 Amine 4 Veteran 720 Curtail WeedDestroy Platoon Crossbow Escalade Weedmaster Solution Savage Weedone LV4	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	Ester and acid formulations of 2,4-D may provide a good alternative to amine formulations. A number of the 2,4-D products come premixed with other herbicides.	Amine formulations of 2,4-D are restricted for use within 60' of all water	Amine formulations cause irreversible eye damage and are highly toxic to rainbow trout. All 2,4-D products pose risks when applied near grapes and other sensitive crops.
Bromacil	Krovar 1 DF Hyvar	Zone 1	Nonselective pre-emergent grass and weed control	Krovar and Hyvar are premixed with diuron	Westside - Restricted for use Eastside - Krovar restricted for use within 60' of all water	Bromacil is potentially mobile in soil, use caution if rain is possible.
Bromoxynil	Buctril 2EC BroClean Brox 2E	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	Effective broadleaf weed control without grass seed suppression	Westside - Restricted for use Eastside - Restricted for use within 60' of all water	Highly toxic to fresh water fish
Chlorsulfuron	Telar XP Landmark XP	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	Product highly effective on Canadian thistle and horsetail. Landmark is premixed with Oust.	None	None
Clopyralid	Transline Curtail Pathfinder	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	Curtail is premixed with 2,4-D, Pathfinder is premixed with triclopyr	Curtail and Pathfinder are restricted for use within 60' of all water because of mixture with other restricted herbicides.	Curtail contains 2,4-D amine which causes irreversible eye damage and is highly toxic to rainbow trout
Dicamba	Vanquish Veteran 720	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	Vanquish is the dicamba formulation without 2,4-D	Veteran 720 is restricted for use within 60' of all water because of 2,4-D amine content	Veteran 720 contains 2-4-D amine which causes irreversible eye damage and is highly toxic to rainbow trout
Dichlobenil	Norosac 4G Casoron	Ornamental planting beds	Pre-emergent weed control in ground cover beds. Post emergent control of grasses.	Highly effective for pre-emergent control of unwanted weeds in ornamentals	Restricted for use within 60' of all water	Dichlobenil is highly toxic to aquatic insects
Diflufenzopyr	Overdrive	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	None	None	None
Diuron	Karmex Diuron 4 L Diuron 80 DF	Zone 1	Nonselective pre-emergent grass and weed control	Cost effective weed control for Zone 1 in Eastern Washington	Westside - Restricted for use Eastside - Restricted for use within 60' of all water	Highly toxic to fish.
Flumioxazin	Payload	Zone 1	Nonselective pre-emergent grass and weed control	Second year of use in zone 1, still evaluating	Restricted for use within 60' of all salt water	Highly toxic to estuarine invertebrates
Fluroxypyr	Vista	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	None	None	Highly toxic to Eastern Oyster, high surface runoff potential
Fosamine	Krenite S	Tree and brush control in Zones 2 & 3	Selective broadleaf treatment	Effective broadleaf tree control without visual impacts	None	None
Glyphosate	Roundup Pro Razor Pro Buccaneer Aquaneat Rodeo Aquamaster	Zone 1, spot spray around shrub and tree plantings, aquatic weed control (Rodeo, Aquamaster)	Nonselective control of all vegetation	Rodeo, Aquamaster and Aquaneat are approved for use in or over water. Aquatic versions of glyphosate products are approved for use with NPDES permit.	None	None
Imazapyr	Arsenal Habitat	Zone 1	Pre and post-emergent non-selective control of all vegetation	Habitat is an aquatic version of Arsenal - good alternative to glyphosate in certain cases	None	High surface runoff potential, potentially mobile in soil if rain is possible.
Isoxaben	Gallery 75DF	Turf & Ornamental	Pre-emergent weed control in ground cover beds	Works well by itself or with Ronstar	Restricted for use within 60' of all water	High surface runoff potential
Metsulfuron-methyl	Escort XP Metsulfuron Methyl 60 DF	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf and conifer treatment	None	None	None
Norflurazon	Predict	Zone 1	Pre-emergent Weed control in Zone 1 and ground cover beds	Good Zone 1 product but may be difficult to keep in suspension	Restricted for use within 60' of all water	High surface runoff potential
Oryzalin	Oryzalin A.S. Surflan A.S	Zone 1 Ornamental planting beds	Pre-emergent Weed control in Zone 1 and ground cover beds	Product requires additional rinsing to thoroughly remove residues from empty container	Restricted for use within 60' of all water	Highly toxic to fish
Oxadiazon	Ronstar G Ronstar WSP	Turf & Ornamental	Pre-emergent weed control in ground cover beds	Works well by itself or with Gallery	Restricted for use within 60' of all water, gardens, plants bearing edible fruit	Highly toxic to fish
Pendimethalin	Pendulum 2G Pendulum Aqua	Zone 1 Turf & Ornamental	Nonselective Pre-emergent grass and weed control	None	Westside - Restricted for use Eastside - Restricted for use within 60' of all water	Highly toxic to fish, high potential for loss on eroded soil
Picloram	Tordon	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	Highly effective for conifer and broadleaf weed control in Eastern Washington	Westside - Restricted for use Eastside - Restricted for use within 60' of all water	Highly mobile in soil and readily adsorbed through roots of desirable trees
Pyraflufen	Edict	Noxious and nuisance weed control, Zones 2 and 3	2,-4-D substitute, effective on Kochia, Russian thistle	Effective with Roundup for Kochia control	Restricted for use within 60' of all water	Irreversible eye damage, highly toxic to Rainbow Trout
Sulfentrazone	Portfolio	Zone 1	Nonselective pre-emergent grass and weed control	New product available for use in 2006	Westside - Restricted for use Eastside - Restricted for use within 60' of all water	High surface runoff potential, potentially mobile in soil if rain is possible.
Sulfometuron-methyl	Oust Landmark XP	Zone 1	Nonselective pre/post emergent grass and weed control	Landmark is premixed with Telar	None	None
Tebuthiuron	Spike 80DF	Zone 1	Nonselective pre-emergent grass and weed control	None	Westside - Restricted for use Eastside - Restricted for use within 60' of all water	High surface runoff potential, potentially mobile in soil if rain is possible.
Triclopyr Amine	Garlon 3A	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	None	None	Irreversible eye damage
Triclopyr Ester	Garlon 4 Crossbow Pathfinder	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	Works well for invert applications. Crossbow is premixed with 2,4-D, Pathfinder with clopyralid	Restricted for use within 60' of all water	Highly toxic to fish

Appendix C:
Northwest Region Area 5
Zone 1 Maintenance
Map 1 of 1

Snohomish

King

Legend

- Zone 1
- Zone 1 Around Hardware
- State Routes
- 75 Mile Post Markers
- County Boundaries
- City Limits
- Major Lakes
- Coast (Major Shoreline)
- NW area 5

0 5

Miles

N

Washington State Department of Transportation

August 2006

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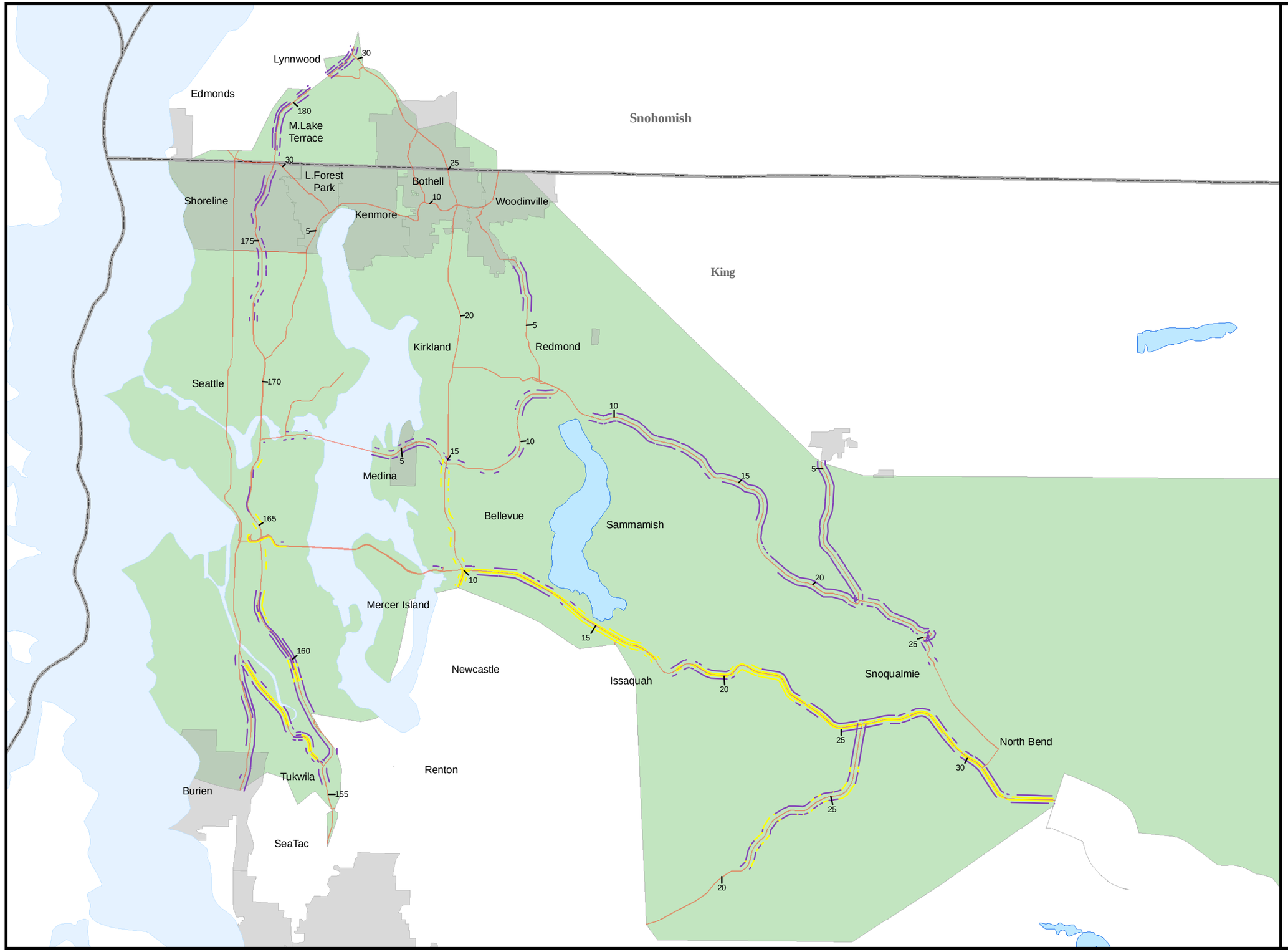
Appendix D:

Northwest Region Area 5
Routine Mowing
Map 1 of 1



Legend

- Multi Pass
- Single Pass
- State Routes
- 75 Mile Post Markers
- County Boundaries
- Major Lakes
- City Limits
- Coast
- NW area 5

0 5
Miles

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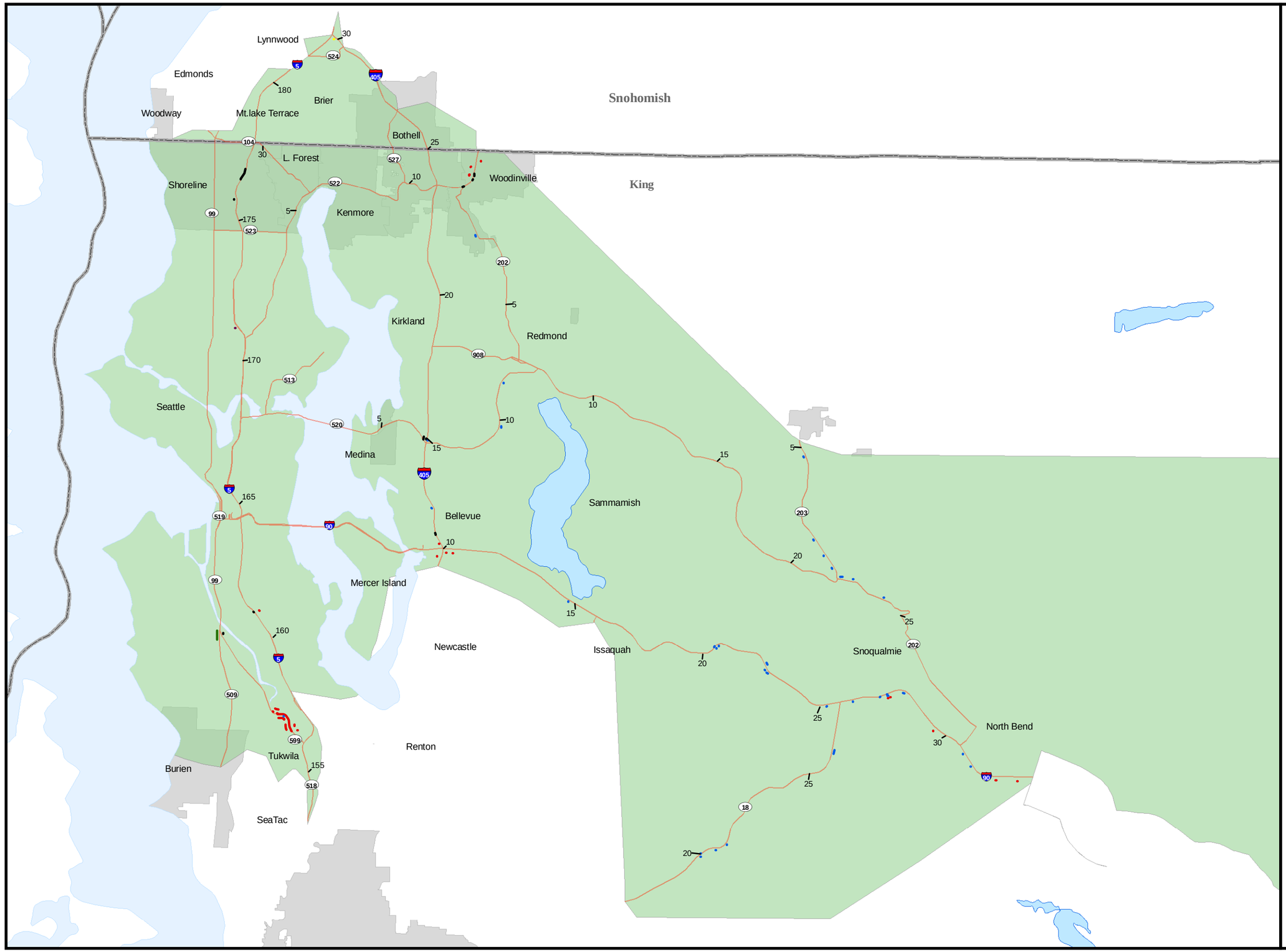
Appendix E:

Northwest Region Area 5
Noxious Weed Locations
Map 1 of 1



Legend

- Dalmation Toadflax
- Giant Hogweed
- Knapweed
- Phragmities
- Poison Hemlock
- Tansy Ragwort
- State Routes
- 75 Mile Post Markers
- County Boundaries
- Major Lakes
- City Limits
- Coast
- NW area 5

0 5
Miles

N

Washington State Department of Transportation

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Appendix F:

Northwest Region Area 5
Nuisance Weed Locations
Map 1 of 3

Lynnwood
Edmonds
Woodway
Mt.lake Terrace
Brier
Bothell
L. Forest
Shoreline
Kenmore
Woodinville
Snohomish
King
Kirkland
Redmond
Seattle
Medina
Sammamish
Bellevue
Mercer Island
Newcastle
Issaquah
Snoqualmie
North Bend
Renton
Tukwila
Burien
SeaTac

Legend

- Poison Hemlock
- Japanese Knotweed
- Butterfly Bush
- Blackberry
- State Routes
- Mile Post Markers
- County Boundaries
- Major Lakes
- City Limits
- Coast
- NW area 5

0 5
Miles

N

Washington State Department of Transportation

August 2006

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Appendix F:

Northwest Region Area 5
Nuisance Weed Locations
Map 2 of 3

Lynnwood
Edmonds
Woodway
Mt.lake Terrace
Brier
Bothell
L. Forest
Shoreline
Kenmore
Woodinville
Snohomish
King
Kirkland
Redmond
Seattle
Medina
Sammamish
Bellevue
Mercer Island
Newcastle
Issaquah
Snoqualmie
North Bend
Renton
Tukwila
Burien
SeaTac

Legend

- Canada Thistle
- Bull Thistle
- Oxeye Daisy
- State Routes
- 75 Mile Post Markers
- County Boundaries
- Major Lakes
- City Limits
- Coast
- NW area 5

0 5
Miles

N

Washington State Department of Transportation

August 2006

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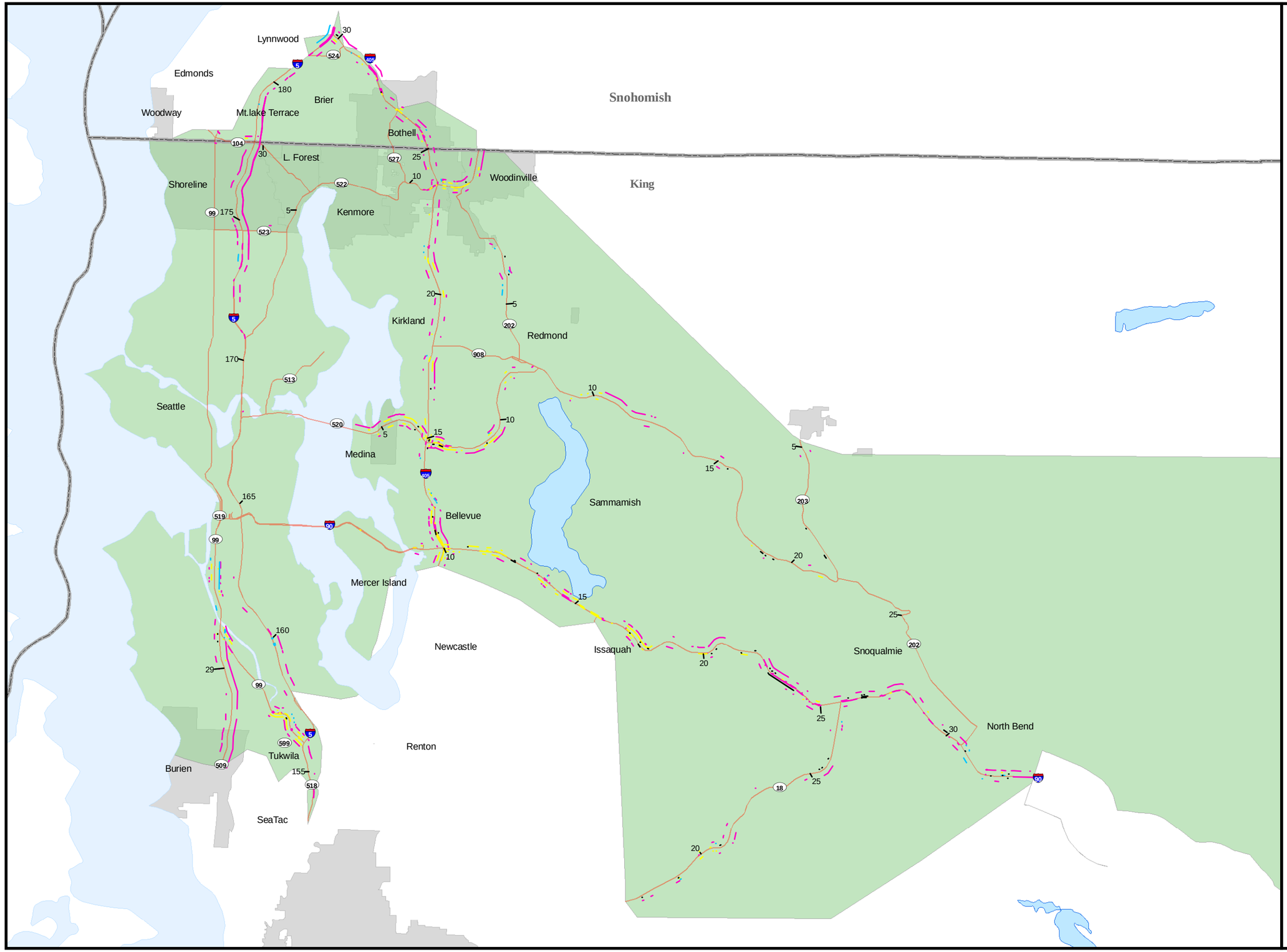
Appendix F:
Northwest Region Area 5
Nuisance Weed Locations
Map 3 of 3



Legend

- Mullein
- Common Tansy
- St. Johnswort
- Scotch Broom
- State Routes
- Mile Post Markers
- County Boundaries
- Major Lakes
- City Limits
- Coast
- NW area 5

0 5

Miles

N

Washington State Department of Transportation

August 2006

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Definitions:

Locations are distinguished between opposing sides of the highway by right shoulder (RS) and median shoulder (LS) in relation to direction of travel, indicated by increasing (INC) or decreasing (DEC) mile markers.

Description *- Brief explanation of special treatment requirement*

Route	Direction	Shoulder	BEG MP	END MP	Type	Description
005	INC	RS	153.89	154.78	Exit 154A - Southcenter Parkway	
005	INC	RS	155.53	156.09	Exit 156 - Tukwila W. Marginal W.	
005	INC	RS	157.33	158.09	Exit 157 - MLK JR. Way	
005	INC	RS	160.34	163.20	Planted Vegetation	
005	INC	RS	163.20	164.37	Raised Structure SMA type 1	
005	INC	RS	167.36	168.13	Exit 168A - Lakeview Blvd	
005	INC	RS	169.03	171.61	Formal Landscape	
005	INC	RS	172.43	172.98	Exit 173 - Northgate Way	
005	INC	RS	173.58	173.84	Exit 174 - NE 130th ST	
005	INC	RS	173.84	174.00	IVM treatment (IVM)	
005	INC	RS	174.31	175.00	Exit 176 - NE 145th ST	
005	INC	RS	175.30	176.31	Transit Base	
005	INC	RS	176.31	177.30	Landscaped mow around plantings	
005	INC	RS	177.45	178.46	Exit 177 - Lake Forest Park	
005	INC	RS	178.99	179.50	Exit 179 - 220th ST SW	
005	INC	RS	180.33	180.66	Exit 181 - Lynnwood 44th Ave W	
005	INC	RS	181.14	182.71	Exit 182 - Alderwood Mall Parkway	
005	DEC	RS	183.10	182.45	Exit 182 - SR 405 Bellevue Renton	
005	DEC	RS	181.90	180.67	Exit 181 - 196th ST. SW Lynnwood	
005	DEC	RS	179.54	179.08	Exit 179 - 220th ST. SW	
005	DEC	RS	178.44	177.63	Exit 177 - Lake Forest Park	
005	DEC	RS	176.38	176.00	Exit 176 - 175th ST. Shoreline	
005	DEC	RS	175.71	175.42	Transit Terminal	
005	DEC	RS	174.78	174.34	Exit 175 - NE 145th ST.	
005	DEC	RS	174.11	173.65	Spyder mowed around planting	
005	DEC	RS	173.36	173.04	Spyder mowed around planting	
005	DEC	RS	173.04	172.57	Exit 173 - Northgate Way	
005	DEC	RS	171.72	171.23	Exit 172 - N. 85th ST.	
005	DEC	RS	170.99	170.56	Exit 171 - N.E. 71st ST.	
005	DEC	RS	169.97	169.12	Exit 169 - N.E. 50th ST./N.E.	
005	DEC	RS	168.32	164.17	Exit 168A Roanoke ST. to I-90 I/C	
005	DEC	RS	164.17	162.67	Raised Structure SMA type 1	
005	DEC	RS	161.95	161.07	Exit 162 - Corson Ave. & Albro Ave.	
005	DEC	RS	158.27	158.01	Exit 158 - Boeing Acces Rd.	
005	DEC	RS	157.96	157.48	ESA (Priority 2)	
005	DEC	RS	157.84	157.79	ESA (Priority 2)	
005	DEC	RS	157.69	157.59	ESA (Priority 2)	
005	DEC	RS	157.66	157.12	Exit 157 - Martin Luther King Way	
005	DEC	RS	156.26	155.85	Exit 156 - Tukwila Interurban Ave.	
005	DEC	RS	155.03	154.04	Exit 154B - South Center Blvd.	
018	INC	RS	19.91	20.72	On and Off Ramp Hobart/Issaquah	
018	INC	RS	27.68	27.86	Off Ramp to SR 90	

Definitions:

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Description *- Brief explanation of special treatment requirement*

Route	Direction	Shoulder	BEG MP	END MP	Type	Description
018	DEC	RS	20.73	19.88	On and off Ramp Hobart/Isaquah	
090	INC	RS	2.64	3.51	Formal landscaping	
090	INC	RS	5.82	5.99	Exit 6 - W. Mercer Way	
090	INC	RS	6.55	9.21	Formal landscaping	
090	INC	RS	9.81	10.20	Exit 10B - Richards Rd.	
090	INC	RS	10.92	12.13	Exit 11A - 150th Ave.	
090	INC	RS	13.30	14.32	Exit 13 - W. Lake Sammamish	
090	INC	RS	15.48	16.34	Exit 15 - 17th Ave. NW	
090	INC	RS	16.85	18.38	Exit 17 - Front St.	
090	INC	RS	19.98	20.77	Exit 20 - High Point Way	
090	INC	RS	22.24	22.85	Exit 22 - Preston/Fall City	
090	INC	RS	25.39	26.21	Exit 25 - SR 18/Snoqualmie Parkway	
090	INC	RS	27.16	27.34	Exit 27 - Snoqualmie/Norh Bend	
090	INC	RS	30.27	31.00	Exit 31 - Sr 202/North Bend	
090	INC	RS	32.27	33.07	Exit 32 - 436th Ave. SE	
090	DEC	RS	32.85	32.07	Exit 32 - 436th Ave. SE	
090	DEC	RS	30.89	30.21	Exit 31 - SR 202/North Bend	
090	DEC	RS	27.27	26.78	Off Ramp Winery Rd.	
090	DEC	RS	25.91	24.98	Exit 25 - SR 18/Auburn Tacoma	
090	DEC	RS	22.77	22.10	Exit 22 - Preston/Fall City	
090	DEC	RS	20.53	19.68	Exit 20 - High Point Way	
090	DEC	RS	18.36	17.64	Exit 18 - E. Sunset Way	
090	DEC	RS	17.41	16.64	Exit 17 - Front St.	
090	DEC	RS	16.17	15.44	Exit to SR 900	
090	DEC	RS	13.98	13.13	Exit 13 - W. Lake Sammamish	
090	DEC	RS	12.34	10.96	Exit 11 - 161st. Ave. SE	
090	DEC	RS	10.43	9.70	Exit 10 - SR 405 N. & S. bound	
090	DEC	RS	9.35	8.95	off Ramp	
099	INC	RS	23.03	23.29	Exit to SR 99 S. bound	
099	INC	RS	23.64	23.93	Exit to W. Martinal	
099	INC	RS	24.55	25.13	Exit Des Moines Dr.	
099	INC	RS	25.41	25.63	On ramp	
099	DEC	RS	26.03	25.56	Exit South Park	
099	DEC	RS	25.14	24.56	Exit to 14th Ave S.	
099	DEC	RS	23.31	23.05	Exit S. 116th St.	
104	Both	RS	27.58	28.23	City of Edmonds	Maintain by city
104	Both	RS	29.84	32.28	City of Shoreline	Maintain by city

Definitions:

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Description *- Brief explanation of special treatment requirement*

Route	Direction	Shoulder	BEG MP	END MP	Type	Description
202	Both	RS	0.00	2.81	City of Woodinville	Maintain by city
202	Both	RS	4.49	9.19	City of Redmond	Maintain by city
202	Both	RS	25.42	25.90	City of Snoqualmie	Maintain by city
202	Both	RS	26.04	30.60	City of Snoqualmie	Maintain by city
405	INC	RS	10.70	11.61	Exit 11 - SR 90 Seattle/Spokane	
405	INC	RS	12.49	13.97	Exit 12 - SE 8th St.	
405	INC	RS	14.27	15.45	Exit 14 - SR 520	
405	INC	RS	17.03	18.48	Exit 17 - NE 70th Place	
405	INC	RS	19.60	21.27	Exit 20A/20B - NE 116th St.	
405	INC	RS	22.39	23.11	Exit 22 - NE 160th St.	
405	INC	RS	23.28	24.99	Exit 23 - Woodinville/Wenatchee	
405	INC	RS	26.39	27.39	Exit 26 - Bothel/Mill Creek	
405	INC	RS	29.77	30.23	Exit to SR 005/Vancouver BC	
405	DEC	RS	30.16	29.71	On ramp from SR 005	
405	DEC	RS	27.03	26.26	Exit 26 - Both/Mill Creek	
405	DEC	RS	24.84	24.23	Exit 24 - NE 195th St.	
405	DEC	RS	24.03	23.44	Exit 23B - SR 522 Bothell	
405	DEC	RS	22.87	22.22	Exit 22 - NE 160th St.	
405	DEC	RS	21.06	19.36	Exit 20 - NE 124th St.	
405	DEC	RS	18.56	17.88	Exit 18 - NE 85th St.	
405	DEC	RS	17.54	17.12	Exit 17 - NE 70th Place	
405	DEC	RS	15.42	14.48	Exit 14 - SR 520 Redmond/Seattle	
405	DEC	RS	14.68	14.46	On Ramp	
405	DEC	RS	14.17	13.05	Exit 13B - NE 8th St.	
405	DEC	RS	12.90	12.39	Exit 12 - SE 8th St.	
405	DEC	RS	11.60	10.75	Exit 11 - SR 90	
509	INC	RS	25.62	26.14	On ramp from SR 518	
509	INC	RS	26.67	27.28	Exit to So. 128th St.	
509	INC	RS	27.92	28.32	On ramp	
509	INC	RS	29.39	29.77B	Exit South Park/Cloverdale St.	
509	INC	RS	29.51	29.90	Exit to South 99/W. Marginal Way	
509	DEC	RS	29.87	29.20	Exit to South 99/W. Marginal Way	
509	DEC	RS	28.07	27.88	Exit to 5th Ave. S.	
509	DEC	RS	27.09	26.47	Exit to S. 128th St.	
509	DEC	RS	26.02	25.60	Exit to SR 518	
513	Both	RS	0.00	3.35	City of Seattle	Maintain by city
519	INC	RS	0.00	1.14	City of Seattle	Maintain by city

Definitions:

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Description *- Brief explanation of special treatment requirement*

Route	Direction	Shoulder	BEG MP	END MP	Type	Description
520	INC	RS	0.00	0.33	On ramp from SR 005	
520	INC	RS	0.71	1.20	Exit to Montlake Blvd	
520	INC	RS	1.54	1.63	On ramp	
520	INC	RS	4.10	4.25	Exit to Bus Stop	
520	INC	RS	4.38	4.60	Exit 84th Ave. NE	
520	INC	RS	5.15	5.43	Exit to Bus Stop	
520	INC	RS	5.80	6.29	Exit to Bellevue Way NE	
520	INC	RS	6.66	7.06	Exit to SR 405	
520	INC	RS	7.37	7.57	Exit to 124th Ave NE	
520	INC	RS	8.78	9.61	Exit to 148th Ave NE	
520	INC	RS	9.69	11.31	Exit to NE 40th St.	
520	INC	RS	11.47	11.82	Exit to W. Lake Sammamish	
520	INC	RS	12.34	12.72	Exit to SR 202/Redmond Way	
520	DEC	RS	12.73	12.48	On Ramp from Redmond Way	
520	DEC	RS	11.79	11.47	Exit to W. Lake Sammamish	
520	DEC	RS	11.22	9.73	Exit to NE 51st ST.	
520	DEC	RS	9.51	8.86	Exit to 148th Ave. NE	
520	DEC	RS	7.49	7.29	On ramp	
520	DEC	RS	7.08	6.66	Exit to SR 405	
520	DEC	RS	6.48	5.75	Exit to 108th Ave. NE	
520	DEC	RS	5.32	5.17	Exit 92nd Ave. NE	
520	DEC	RS	4.70	4.59	On ramp	
520	DEC	RS	4.23	4.00	ramp to Bus Stop	
520	DEC	RS	1.52	0.72	Exit to Lake Washington Blvd	
520	DEC	RS	0.35	0.10	Exit to SR 005	
522	Both	RS	0.00	4.23	City of Seattle	Maintain by city
522	Both	RS	4.23	6.21	City of Lake Forest	Maintain by city
522	Both	RS	6.21	8.23	City of Kenmore	Maintain by city
522	Both	RS	8.62	10.57	City of Bothell	Maintain by city
522	INC	RS	10.69	11.43	Exit to SR 405	
522	INC	RS	11.84	12.29	Exit to SR 202 Woodinville/Redmond	
522	INC	RS	12.66	12.93	Exit to NE 195th St. Duvall	
522	DEC	RS	12.92	12.55	On ramp	
522	DEC	RS	12.29	11.88	Exit to SR 202 Woodinville/Redmond	
522	DEC	RS	11.67	12.86	Exit to SR 405 Bellevue	
523	Both	RS	0.00	2.26	City of Seattle	Maintain by city
527	Both	RS	0.00	2.73	City of Bothell	Maintain by city

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Description *- Brief explanation of special treatment requirement*

Route	Direction	Shoulder	BEG MP	END MP	Type	Description
599	INC	RS	0.11	0.65	Exit to Interurban Ave.	
599	INC	RS	1.47	1.75	Exit to Tukwila Int. Blvd	
599	DEC	RS	1.72	1.54	On ramp	
599	DEC	RS	1.34	0.84	On ramp	
599	DEC	RS	0.55	0.31	Exit to Tukwila S. 133rd St.	
599	DEC	RS	0.23	0.06	Exit to SR 005	
908	Both	RS	3.52	4.51	City of Kirkland	Maintain by city
908	Both	RS	4.51	6.66	City of Redmond	Maintain by city

Washington State Department of Transportation

Integrated Vegetation Management Record

Org Code	County	Date		Vegetation Management Zone(s)
435420	Grays Harbor	8/7/2006		☒ Zone 1 ☒ Zone 2 ☐ Zone 3

Area: SR 101 MP 104 to MP 137 Location:

Check Appropriate Boxes: ☒ NB ☐ EB ☒ SB ☐ WB ☒ Roadside ☒ Shoulder ☐ Median ☐ Landscaped Area ☐ Rest Area ☐ Park-n-Ride ☐ Interchange ☐ Bridge ☐ Ramp ☐ Mitigation Site ☐ Stormwater ☐ Yard/Stockpile

Third Party Damage: ☐ Yes

Sensitive Sites: ☐ Aquatic ☐ Wetlands

Target: ☒ Noxious Weeds ☐ Nuisance Weeds ☐ Brush/Trees ☐ Hazard Tree ☐ Other

List Target/Species: Orange Hawkweed

Reason for Action:
☒ Noxious Weeds ☐ Nuisance Weeds ☐ Fire Prevention ☐ Restore Native Veg. ☐ Zone 1 Pilot ☐ Aesthetic
☐ Site Distance ☐ Hazard Vegetation ☐ Customer Request ☐ Enhance Vegetation ☐ Slope Stabilization ☐ Other _____

Long term IVM plan (Describe goals/objectives and a step-by-step approach over time)

To control and eradicate this weed from zones 1 & 2.This was the first treatment this year but we are seeing good results from the previuos treatments from the year before.

Approximate Acres to Accomplish: 1.5

Activities		Planned date of Treatment	Actual date of Treatment
Manual	☐ Digging ☐ Pulling ☐ Planting ☐ Lopping ☐ Scalping ☐ Other _____		
Mechanical	☐ Aerial Saw Work ☐ Tractor Brush Cutter ☐ Mower/Chem ☐ Manual Brush Cutting ☐ Tractor Mower ☐ Other		
Bio-Control	☐ Insects ☐ Pathogens ☐ Parasites Type/Species _____		
Cultural	☐ Burning ☐ Grading ☐ Seeding ☐ Fertilizing ☐ Grazing ☐ Soil Amendment ☐ Other _____		
Chemical	3119456 Record Number		8/7/2006

#1 Evaluation and Date

#2 Evaluation and Date

#3 Evaluation and Date

Washington State Department of Transportation

Pesticide Application

Main Menu | Print | New Record | Form 8420 | List View | Blank Record | Delete Record | Find Record

Org. Code	County	Date of Application	Start / Finish	ICP	Stores Issue Ticket Number(s)
415520	King	10/13/2006	Start 12:30 ○ AM ◉ PM / Finish 14:00 ○ AM ◉ PM	051A	F42735/F42733/42734

Area: SR 99 MP 25.12 to MP 26.01 and MP ____ to MP ____ and MP ____ to MP ____ and MP ____ to MP ____

Check Appropriate Boxes:
- ☒ NB ☐ EB ☐ SB ☐ WB
- ☐ Roadside ☒ Shoulder ☐ Median
- ☐ Landscaped Area ☐ Rest Area ☐ Park-n-Ride
- ☐ Interchange ☐ Bridge ☐ Ramp
- ☐ Yard/Stockpile
- ☒ Spot Spray ☒ Blanket Spray ☐ Banded Width
- ☐ Aquatic ☐ Wetlands

☐ Weeds ☒ Noxious Weeds ☐ Disease
☐ Brush ☐ Insects ☐ Other List Pest(s): Common Reed grass, Japanese knotweed, Blackberries

Start Weather Conditions: Temperature 54 °F(°C) Wind (Direction From) NW Wind (Range) 2 mph(km/h)
○ Sunny ◉ Broken ○ Overcast No Rain ○ Light Scattered Showers ○ Hard Showers

Finish Weather Conditions: Temperature 60 °F(°C) Wind (Direction From) NW Wind (Range) 4 mph(km/h)
◉ Sunny ○ Broken ○ Overcast No Rain ○ Light Scattered Showers ○ Hard Showers

Tank No.	Material Name	Material Type	EPA Reg. No.	Lot Number	Product Per Acre (hectare)	Unit	Total Daily Usage	Unit
1	Water	Carrier	----------	Spokane St.	100	Gal	50	Gal
1	Aquamaster	Pesticide	524-343	MTR00805AJ	96	Ozl	48	Ozl
1	MSO	Adjuvant	----------	77562	32	Ozl	16	Ozl
1	Turf Trax	Adjuvant	----------	34294	32	Ozl	16	Ozl

Total 0.50 **Acres(hectares) Treated at** 100 **gallons(liters) of spray per acre(hectare).**

Equipment Number	Tank Size	Calibration Date	Vehicle Speed	Nozzle Pressure	Width of Spray Pattern
21A36-5	1 200 2 ____ 3 ____ 4 ____ 5 ____	09/25/2006	n/a mph(km/h)	5 PSI(kPa)	N/A Feet(meter)

☐ Handspreader ☒ Handgun ☐ Boom
☐ Backpack ☐ Fixed Nozzle ☐ Other (Specify) ____
☒ Tank Mix (Conv.) ☐ Injection ☐ Invert

Operator Name	Operator Pesticide License No.	Operator Signature	Driver Name
Gabriel Olivas	52698		Richar Blair

Remarks: No water was present at the time of spray.

Buffer Truck Driver's Name:

Pesticide Sensitivity Registration Applies: ☐ Yes ☒ No

Contacts:

Division of Emergency Management (1-800-258-5990)

Additional Notes

DOT Form 540-506 EF Revised 9/2001 Distribution: OSC Maint. Operator Region File *Send OSC Copy Within 5 Days*

Osl= Ounces Dry Lb= Pound Oxl= Ounces Liquid Ga= Gallon Pt=Pint Qt= Quart g= gram kg=kilogram ml=Milliliter L= Liter